



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P200302048WO	FOR FURTHER ACTION See Form PCT/PEA/416	
International application No. PCT/DK2005/000019	International filing date (day/month/year) 14.01.2005	Priority date (day/month/year) 26.01.2004
International Patent Classification (IPC) or national classification and IPC D04H13/00, D04H3/10		
Applicant LM GLASFIBER AS et al.		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input type="checkbox"/> sent to the applicant and to the International Bureau a total of sheets, as follows:</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand 24.11.2005	Date of completion of this report 02.02.2006	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Barathe, R Telephone No. +31 70 340-3519 	

INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY

10/586820
AP20 Rec'd PCT/PTO 19 JUL 2005
International application No.
PCT/DK2005/000019

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-14 received on 24.11.2005 with letter of 24.11.2005

Claims, Numbers

1-28 received on 24.11.2005 with letter of 24.11.2005

Drawings, Sheets

1/10-10/10 as published

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
ON PATENTABILITY**

International application No.
PCT/DK2005/000019

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-28
	No: Claims	
Inventive step (IS)	Yes: Claims	1-28
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-28
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/DK2005/000019

Point V.

1) Preliminary observation

The following amendment in claims 1 and 16:

"at an angle"

is based on the originally filed figures 1-2, 4-5, 7-12.

2) Prior Art

D1: US-A-4 183 993 (BENSTEAD, BRYAN C ET AL) 15 January 1980 (1980-01-15)

3) Novelty and Inventive Step

D1 is considered as the closest prior art document

It discloses a fibre mat comprising longitudinally extending parallel batches of fibres held together by stitches extending longitudinally and crosswise.

The batches are spanned symmetrically about the axis situated longitudinally between them (D1: figures 1-4).

3.1) Independent claim 1

The difference between the method of claim 1 and D1 is that the holder means span each batch at an angle. In D1 the holder means includes a multiplicity of longitudinally extending stitches and a multiplicity of transversally extending stitches (D1: col. 4 lines 29-32). Those transversally extending stitches form a right angle (90 degrees) with the longitudinally extending stitches therefore spanning the batches at no angle.

The subject-matter of claim 1 is therefore novel (Articles 33(1) and (2) PCT).

The problems solved by this difference are:

- to increase the speed of sewing the bundles together;
- to cut the fiber mat in smaller pieces without fraying or unravelling;
- to keep the bundles straight in all directions and to prevent thus the buckling up and

**INTERNATIONAL PRELIMINARY
REPORT ON PATENTABILITY
(SEPARATE SHEET)**

International application No.

PCT/DK2005/000019

down out of the plane of the fiber mat caused by transverse stitches.

The solution consists in spanning the batches at an angle, keeping thus the bundles straight and symmetrical about the longitudinal axis situated between them.

This solution is neither obvious to the skilled person nor suggested in the prior art to solve the posed problem.

Therefore claim 1 is inventive in the sense of Articles 33 (1) and (3) PCT.

3.2) dependent claims 2-15

Dependent claims 2-15 are also novel and inventive.

3.3) Claim 16

The fibre mat made according to the process of new and inventive claim 1 is also considered as novel and inventive.

3.4) Dependent claims 17-26

For the same reason, dependent claims 17-26 are also novel and inventive.

3.5) Claim 27

The use of the fibrous mat according to claims 16-26 is also novel and inventive.

3.6) Dependent claim 28

Dependent claims 28 is also novel and inventive.